

Multiplying Fractions 2 - Mixed Numbers

Review

Change from an improper fraction to a mixed number:

How many 3s
divide evenly into 23?

$$\frac{23}{3} = 7 \frac{2}{3}$$

add $\frac{2}{3}$
 $\frac{5}{3}$
 \times

What are you left with?

Change from a mixed number to an improper fraction:

$$5 \frac{2}{3} = \frac{17}{3}$$

To multiply with a mixed number, change to an improper fraction first and then:

- 1) multiply the numerators
- 2) multiply the denominators
- 3) simplify (state in lowest terms, if possible)
- 4) state solution as a mixed number

Example 1 - Improper Fraction x Proper Fraction

Determine $\frac{5}{4} \times \frac{2}{3}$.

$$\frac{10}{12}$$

$$\frac{5}{6}$$

Example 2 - Improper Fraction x Improper Fraction

Calculate $\frac{8}{3} \cdot \frac{11}{6}$.

$$\frac{88}{18}$$

$$\frac{44}{9} \text{ OR } 4 \frac{8}{9}$$

Outcome: N6 - Demonstrate an understanding of multiplying and dividing positive fractions and mixed numbers

Example 3 - Mixed Numbers

a) Determine $2\frac{5}{6} \times 4$. $\frac{17}{6} \times \frac{4}{1} = \frac{68}{6}$
 $= \frac{34}{3}$ OR $11\frac{1}{3}$

b) What is $1\frac{3}{4} \cdot \frac{3}{4}$? $\frac{7}{4} \cdot \frac{3}{4} = \frac{21}{16}$ OR $1\frac{5}{16}$

c) Calculate $\left(3\frac{1}{3}\right)\left(2\frac{1}{10}\right)$. $\left(\frac{10}{3}\right)\left(\frac{21}{10}\right) = \frac{210}{30}$
 $= 7$

Your Turn!!!

Multiply the following.

a) $5 \times 3\frac{3}{4}$
 $\frac{5}{1} \times \frac{15}{4} = \frac{75}{4}$
 OR
 $18\frac{3}{4}$

b) $\frac{1}{2} \cdot 2\frac{1}{2}$
 $\frac{1}{2} \cdot \frac{5}{2} = \frac{5}{4}$

c) $\left(3\frac{2}{3}\right)\left(1\frac{1}{2}\right)$
 $\left(\frac{11}{3}\right)\left(\frac{3}{2}\right) = \frac{33}{6}$
 OR
 $5\frac{3}{6}$
 $\rightarrow 5\frac{1}{2}$

Mixed + Fractions



Complete the following:

Worksheet - Multiplying Fractions (D) (odds)

Worksheet - Multiplying Fractions (E) (odds)

Check your solutions using the key provided.

Mixed

Outcome:

N6 - Demonstrate an understanding of multiplying and dividing positive fractions and mixed numbers